

IN THE CLAIMS:

Claim 1. (Currently amended) A method of horizontally structured CAD/CAM modeling, comprising:

~~establishing a coordinate system;~~
~~adding form features to a model a base feature;~~
~~establishing an exclusive parent/child relationship between a set of reference planes and each of the form features; and~~
~~acting on at least one of the form features without affecting other of the form features~~
~~adding a form feature;~~
~~said form feature exhibiting an associative relationship with said coordinate system.~~

Claim 2. (Currently amended) The method of Claim 1 wherein the acting on the at least one of the form features comprises one of editing, suppressing, and deleting the at least one of the form features said associative relationship is a parent/child relationship.

Claim 3. (Currently amended) The method of Claim 1 wherein the reference planes are children of the model is a parent that corresponds to a real-world part ~~said form feature exhibits an associative relationship with another form feature.~~

Claims 4 - 10. (Cancelled).

Claim 11. (Currently amended) The method of Claim 1 wherein ~~said establishing said coordinate system~~ the set of reference planes comprises:
~~creating a first datum~~ reference plane positioned and oriented relative to a reference;
~~creating a second datum~~ reference plane positioned and oriented relative to said reference; and

creating a third ~~datum~~ reference plane positioned and oriented relative to said reference.

Claim 12. (Currently amended) The method of Claim 11 wherein said first-~~datum~~ reference plane, said second-~~datum~~ reference plane, and said third-~~datum~~ reference plane are orthogonal.

Claim 13 - 22. (Cancelled).

Claim 23. (Original) The method of Claim 1 further including modifying a link among a plurality of modeling elements.

Claim 24. (Original) The method of Claim 23 wherein said link comprises an associative relationship.

Claim 25. (Original) The method of Claim 24 wherein said associative relationship is a parent/child relationship.

Claim 26. (Original) The method of Claim 23 wherein said modifying comprises removing said link among said modeling elements.

Claim 27. (Original) The method of Claim 23 wherein said modifying comprises establishing said link among said modeling elements.

Claim 28. (Original) The method of Claim 23 wherein said modifying links among modeling elements includes substituting a second plurality of modeling elements for said plurality of modeling elements.

Claim 29. (Currently amended) A horizontally structured CAD/CAM model, comprising:

~~a coordinate system;~~

~~a base feature;~~
~~a set of reference planes; and~~
~~a form feature features, each of the form features having an exclusive~~
~~parent/child relationship with the set of reference planes, at least one of the form features~~
~~having been acted on without having affected other of the form features~~
~~said form feature exhibiting an associative relationship with said~~
~~coordinate system.~~

Claim 30. (Currently amended) The model of Claim 29 wherein the at least one of the form features acted on comprises one of edited, suppressed, and deleted
~~said associative relationship is a parent/child relationship.~~

Claim 31. (Currently amended) The model of Claim 29 wherein the reference planes are children of the model is a parent that corresponds to a real-world part
~~said form feature exhibits an associative relationship with another form feature.~~

Claims 32 - 38. (Cancelled).

Claim 39. (Currently amended) The model of Claim 38 wherein said
~~coordinate system~~ the set of reference planes comprises:

a first ~~datum~~ reference plane positioned and oriented relative to a
reference;
a second ~~datum~~ reference plane positioned and oriented relative to said
reference; and
a third ~~datum~~ reference plane positioned and oriented relative to said
reference.

Claim 40. (Currently amended) The model of Claim 39 wherein said
first ~~datum~~ reference plane, said second ~~datum~~ reference plane, and said third ~~datum~~
reference plane are orthogonal.

Claims 41 – 50 (Cancelled).

Claim 51. (Original) The model of Claim 29 further including a link which is modifiable among a plurality of modeling elements.

Claim 52. (Original) The model of Claim 51 wherein said link comprises an associative relationship.

Claim 53. (Original) The model of Claim 52 wherein said associative relationship is a parent/child relationship.

Claim 54. (Original) The model of Claim 51 wherein said link is modified via removal thereof among said modeling elements.

Claim 55. (Original) The model of Claim 51 wherein said link is modified via establishment thereof among said modeling elements.

Claim 56. (Original) The model of Claim 51 wherein said link is modified among modeling elements by way of substituting a second plurality of modeling elements for said plurality of modeling elements.

Claim 57. (Currently amended) A storage medium encoded with a machine-readable computer program code for horizontally structured CAD/CAM modeling, said ~~storage medium~~ computer program code including instructions for causing a computer to implement a method comprising:

~~establishing a coordinate system;~~

adding form features to a model ~~a base feature;~~

establishing an exclusive parent/child relationship between a set of reference planes and each of the form features; and

acting on at least one of the form features without affecting other of the form features

~~adding a form feature;~~

~~said form feature exhibiting an associative relationship with said coordinate system.~~

Claim 58. (Currently amended) The storage medium of Claim 57 wherein ~~said associative relationship is a parent/child relationship~~ the acting on the at least one of the form features comprises one of editing, suppressing, and deleting the at least one of the form features.

Claim 59. (Currently amended) The storage medium of Claim 57 wherein ~~said form feature exhibits an associative relationship with another form feature~~ the reference planes are children of the model is a parent that corresponds to a real-world part.

Claims 60 – 66 (Cancelled).

Claim 67. (Original) The storage medium of Claim 64 wherein said modifying comprises removing said link among said modeling elements.

Claim 68. (Original) The storage medium of Claim 64 wherein said modifying comprises establishing said link among said modeling elements.

Claim 69. (Original) The storage medium of Claim 64 wherein said modifying links among modeling elements includes substituting a second plurality of modeling elements for said plurality of modeling elements.

Claim 70. (Currently amended) A computer data signal propagated over a transmission medium for communicating with a computer, the signal including code configured to cause a computer to implement a method for horizontally structured CAD/CAM modeling, said computer data signal comprising code configured to cause a computer to implement a method the method comprising:
establishing a coordinate system;

adding form features to a model a-base feature;
establishing an exclusive parent/child relationship between a set of
reference planes and each of the form features; and
acting on at least one of the form features without affecting other of the
form features
adding a form feature;
said form feature exhibiting an associative relationship with said
coordinate system.

Claim 71. (Currently amended) The computer data signal of Claim 70 wherein ~~said associative relationship is a parent/child relationship~~ the acting on the at least one of the form features comprises one of editing, suppressing, and deleting the at least one of the form features

Claim 72. (Currently amended) The computer data signal of Claim 70 wherein ~~said form feature exhibits an associative relationship with another form feature~~ the reference planes are children of the model is a parent that corresponds to a real-world part.

Claims 73 – 79. (Cancelled).

Claim 80. (Original) The computer data signal of Claim 77 wherein said modifying comprises removing said link among said modeling elements.

Claim 81. (Original) The computer data signal of Claim 77 wherein said modifying comprises establishing said link among said modeling elements.

Claim 82. (Original) The computer data signal of Claim 77 wherein said modifying links among modeling elements includes substituting a second plurality of modeling elements for said plurality of modeling elements.